the dioptric focal power of said second viewing zone increasing progressively from point-to-point in a direction away from said first viewing zone along a principal meridian dividing said second viewing zone into two similar lateral portions;

the second viewing zone having at least three viewing areas, a first of said areas being aligned and centered with said principal meridian intermediately of remaining laterally disposed areas each having a surface so curved that the condition $\delta^2 f/\delta x \delta y = 0$ is fulfilled when x and y are the coordinates in the vertical and horizontal directions respectively of said outermost areas and f is the distance of the refractive surfaces from the x-y plane whereby skew distortion is so optically compensated that at all points on said laterally disposed areas the principal axes of astigmatism lie in vertical and horizontal planes which are parallel to the x and y axes respectively to permit the user of the lens to perceive horizontal and vertical lines in the visual environment as being horizontal and vertical when viewed through said remaining laterally disposed areas, the surfaces of said laterally disposed areas further comprising a portion of a surface of revolution whose axis of revolution is disposed parallel to the direction of said principal meridian of said second viewing zone; and

all adjoining boundaries of said first and second viewing zones and said viewing areas of said second zone being smoothly surface blended.

6. An ophthalmic lens according to claim **5** including a third viewing zone intermediately of said first and second zones, said third zone having a substantially constant dioptric power value no greater than that of any point on said principal meridian of said second viewing zone and no less than that of said first viewing zone, all adjoining boundaries of said first, second and third viewing zones and said viewing areas of said second zone being smoothly surface blended.

7. An ophthalmic lens comprising a lens body having a first refractive surface viewing zone thereon characterized by:

a smooth, unbroken principal meridional curve having continuously varying slope lying along the refractive surface viewing zone in a generally vertical direction and dividing the refractive surface viewing zone into two similar lateral portions, the curvature of the principal meridional curve varying progressively from point to point therealong to provide a predetermined dioptric focal power at each such point according to a predetermined law, the dioptric focal power increasing generally from top to bottom of the viewing zone along the principal meridional curve, and being characterized further by having cross curves defined in the refractive surface viewing zone by planes perpendicular to the principal meridional curve, the curvatures of the cross curves at their points of intersection with the principal meridional curve being respectively equal to the curvature of the meridional curve at the points of intersection;

the first refractive surface viewing zone defined by a power range varying from a first dioptric focal power at the top of the first viewing zone to a second, higher dioptric focal power at the bottom of the viewing zone, the viewing zone being divided into at least three laterally disposed areas;

a first one of the three areas being centrally disposed in the viewing zone, extending vertically therethrough, and having the principal meridional curve passing through the center thereof;

the two outermost of the three areas being disposed at the lateral peripheries of the viewing zone and each having a surface so curved that the condition $\delta^2 f/\delta x \delta y = 0$ is fulfilled when x and y are the coordinates in the vertical and horizontal directions respectively of said outermost areas and f is the distance of the refractive surfaces from the x-y plane whereby skew distortion is so optically compensated that at all points on said outermost areas the principal axes of astigmatism lie in vertical and horizontal planes which are parallel to the x and y axes respectively to permit a wearer of the lens to perceive horizontal and vertical lines in the visual environment as being horizontal and vertical, and

a second viewing zone in vertical justaposition to the first viewing zone, the second one of the viewing zones having a constant dioptric focal power therethrough, there being a downwardly positive discontinuity in dioptric focal power of less than about 0.5 diopters at the boundary between the two viewing zones.

8. An ophthalmic lens according to claim **7** in which a third viewing zone is defined on the refractive surface in other vertical juxtaposition to the first one of the refractive surface viewing zones, the third viewing zone having a constant dioptric focal power therethrough, the constant dioptric focal power in the third viewing zone being equal to the dioptric focal power at the other juxtaposed end of the range of dioptric focal power in the first viewing zone.

9. A progressive power ophthalmic lens according to claim **7** in which the predetermined law defines a constant rate of change of dioptric focal power through the first viewing zone along the principal meridional curve.

10. A progressive power ophthalmic lens according to claim **7** in which the boundary between the viewing zones being blended so that the boundary is invisible.

11. An ophthalmic lens according to claim **7** in which a third viewing zone is defined on the refractive surface in other vertical juxtaposition to the first one of the refractive surface viewing zones, the third viewing zone having a constant dioptric focal power therethrough, there being a second downwardly positive discontinuity in dioptric focal power of less than about 0.5 diopters at the boundary between the first and third viewing zones.

12. A progressive power ophthalmic lens according to claim **11** in which the predetermined law defines a constant rate of change of dioptric focal power through the first viewing zone along the principal meridional curve.

13. A progressive power ophthalmic lens according to claim **12**, in which the boundary between the viewing zones being blended so that the boundary is invisible.

14. A progressive power ophthalmic lens according to claim **7**, in which the boundary between the viewing zones being blended so that the boundary is invisible.

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